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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,450	02/28/2002	Jui Liang	P 0272274	6685

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EXAMINER

TRAN, HENRY N

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,450

Applicant(s)

LIANG, JUI

Examiner

HENRY N. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10. 6) ☐ Other: _____

DETAILED ACTION

This Office action is in response to the applicant's amendment received 6/6/03 (Paper No. 11). The amendments to the specification and the claims have been entered; and applicant's remarks were considered, with the results set forth as following.

1. Claims 1-57 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6-9, 12, and 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Stern et al (U.S. Patent 4,941,156, hereinafter referred to as "Stern").
4. Regarding claims 1 and 12, Stern teaches a method and an apparatus for controlling a frame rate, comprising: a buffer 10; a write control component (a write clock) configured to write data frames to the buffer according to a write pointer 12; a read control component (a read clock) configured to read the data frames from the buffer according to a read pointer 14; and a frequency controller 24 (a PLL 24) configured to compare for determining the difference between the read and write pointers and for adjusting the reading frequency based on the determined difference (see figure 1; col. 1, line 60 to col. 2, line 14). By these reasons, claims 1 and 12 are rejected.

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5. Regarding claims 6-9 and 15-20, Stern also teaches the frequency controller 24 comprising a detector 26 configured to detect a buffer overflow/ or underflow condition for providing a first signal and a second signal responsive to the buffer overflow/ or underflow condition (outputs of the adder 38) and for adjusting the read frequency based on the conditions indicated by the signal outputs, a frequency control element 28 (a digitally controlled oscillator) (see figures 2 and 3; col. 4, line 51 to col. 5, line 3; and col. 9, lines 49-62).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-5, 10-11, 13-14, and 21-57 rejected under 35 U.S.C. 103(a) as being unpatentable over Stern as applied to claims 1, 6-9, 12, and 15-20 above, and further in view of Felts, III et al (U.S. Patent 6,581,164, hereinafter referred to as "Felts, III").

8. Regarding to claims 21, 31, 38 and 44, Stern teaches generally all except for the: "modifying the source data", "the destination video display device", "a source signal interface configured to receive an image source signal", and "a frequency of the display signal is based on an amount of the video data that has not yet been read from the buffer". Felts, III teaches a method and a system for adjusting frequency of a secondary system in an asynchronous systems comprising a reference system and a secondary system; wherein, the method comprises a step of modifying the source data in accordance with capabilities of the destination video display device

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(see col. 13, lines 7-46); and the system comprises: the destination video display device (see col. 5, line 63), a source signal interface 40 (a video decoder 40) configured to receive an image source signal 46, and a frequency of the display signal is based on an amount unread video data stored in the buffer FIFO 70 (see col. 6, lines 35-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Felts, III in the Stern device for producing the claimed invention because this would minimize the size of the FIFO buffer required to eliminate data dropping, data repeating, and associated tearing artifacts for providing an improved quality of video display. By this rationale, claims 21, 31, 38 and 44.

9. Regarding claims 2-5, 10-11, 13-14, and 22-30, 32-37,39-43 and 45-57, Stern also teaches: the reading frequency is equal to the source signal frequency (see col. 9, lines 58-59) (claims 14, 23, 29, 30, and 33), the frequency controller 24 (a PLL 24) includes a frequency control element 28 configured to control the read clock (see the references recited above) (claims 27, 34-43, 45, and 47); and Felts, III also teaches: the use of a scaler for performing a scaling algorithm on the incoming analog video signal to a predetermined pixel array size having a range of supported refresh rates (see col. 13, lines 7-46) (claims 13, 25, 32, 46, and 48-57), the analog source signal 46 is converted to digital signal (see col. 12, lines 28-28) (claim 22), the reading frequency adjusting is a function of detecting and modifying (see the references recited above) (claim 26). Official Notice is taken for the claim limitation “the destination display device is a liquid crystal display” (claim 28) because a video display device using a liquid crystal display is old and well known in the display art. Claims 2-5, 10-11, 13-14, and 22-30, 32-37,39-43 and 45-57 are dependent upon claims 1, 12, 21, 31, 38 and 44, and are rejected on the same reasons set forth in claims 1, 12, 21, 31, 38 and 44, and by the reasons discussed above.

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Response to Arguments

10. Applicant's arguments with respect to claims 1-47 have been considered but are moot in view of the new ground(s) of rejection.

11. The rejection of claims 44-47 under *35 USC § 112*, first paragraph, has been withdrawn based on the explanations provided by the applicants in the above-identified amendment, pages 4-5.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENRY N. TRAN whose telephone number is (703) 308-8410. The examiner can normally be reached on Mon - Fri from 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD A. HJERPE, can be reached at (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

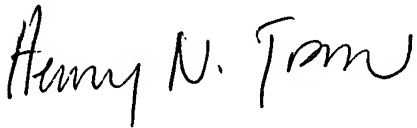
or faxed to:

(703) 872-9314 (for technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office Whose telephone number is (703) 306-0377.

A handwritten signature in black ink that reads "Henry N. Tran". The signature is written in a cursive, flowing style.

HENRY N. TRAN
Examiner
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hnt
September 3, 2003